

Knowledge Management and Balanced Scorecard Outcomes: Exploring the Importance of Interpretation, Learning and Internationality

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The topics of shared interpretation, organizational learning and firm internationalization have been studied extensively. Though considered important factors that shape the international competitive landscape, research synthesizing these interrelated areas has been limited to date. We use the balanced scorecard as a framework for assessing how organizational learning and sensemaking influence actions relating to a global marketing strategy and subsequent financial performance. Using data from 169 multinational corporations, findings indicate that a specific set of knowledge activities is related to balanced scorecard outcomes (e.g. customer performance, innovation and learning performance, and internal process performance). The hypothesized importance of customer performance is confirmed as the only balanced scorecard outcome significantly related to financial performance. A *post hoc* analysis revealed further insights for future research opportunities. Overall, these results suggest that firms can improve their competitive position by emphasizing shared interpretation within the organization and including balanced scorecard elements when assessing performance.

Introduction

Today's firms are confronted with a vast set of competitive challenges that include the ongoing internationalization of markets, rapid advancements in information technology, and the emergence of new organizational forms. To achieve better competitive and financial performance, companies with operations in multiple countries seek to be globally integrated. In particular,

global marketing strategy plays a critical role in determining worldwide performance of the multinational corporation (MNC) (Katsikeas, Samiee and Theodosiou, 2006). However, assessing MNC performance requires more than financial performance measures. The benefits of a global strategy include cost reduction, improved quality of products and programmes, enhanced customer preference, and increased competitive leverage (Yip, 2003). Additionally, with diverse nationalities involved, implementing a global strategy often requires changes that are disruptive and difficult. As such, knowledge management and organizational learning are seen as critical for

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adopting a global marketing strategy, although limited empirical studies examine this relationship (Zou and Cavusgil, 2002).

The internationalization process model of the firm suggests a gradual, evolutionary strategy that offers companies valuable knowledge and learning opportunities over time (Barkema, Bell and Pennings, 1996; Johanson and Vahlne, 1977; Leonidou and Katsikeas, 1996; Melin, 1992). Along with experience, the firm gains access to diverse markets for future development. Typically, the end result is that the firm develops marketing strategies across markets that are not fully integrated. These differences can weaken the company's worldwide cost position, quality management, customer preference and competitive leverage. To overcome these potential disadvantages, MNCs need a global strategy that integrates and manages their marketing activities to achieve a defensible competitive position. In fact, global marketing strategy refers to the extent to which a worldwide business standardizes the product offering, brand portfolio, advertising tactics, distribution channels and other marketing elements in different countries (Yip, 2003; Zou and Cavusgil, 2002). To develop and implement a global strategy, coordination mechanisms must exist between MNC headquarters and subsidiaries that facilitate learning and promote innovation (Bartlett and Ghoshal, 1986; Ghoshal and Bartlett, 1988).

A dynamic competitive environment and rapid advances in information technology have led some scholars to propose that knowledge is the only resource that can foster a sustainable competitive advantage (Grant, 1996; Hedlund, 1994; Liebeskind, 1996; Spender, 1996). The knowledge-based view (KBV) of the firm posits that unique abilities residing in the firm make it possible to create and exploit knowledge that enhances performance. In particular, recent studies incorporating the KBV relate knowledge management to efficiency in MNCs (Ambos, Ambos and Schlegelmilch, 2006) and performance in international joint ventures (Anh *et al.*, 2006). Previous research has found that successful knowledge-focused firms value organizational learning to implement change and remain competitive (Lähteenmäki, Toivonen and Matilla, 2001).

Four key elements of organizational learning are imperative in this process: organizational

memory, information acquisition, information distribution, and shared interpretation (Huber, 1991). According to this approach, a firm learns when behaviour changes occur from information processing. As a result, acquired knowledge is recognized as valuable. However, studies show that organizational learning can meet with resistance in subsidiaries, resulting in localized collective learning (Easterby-Smith, 1997; Hong, Easterby-Smith and Snell, 2006). In fact, Saka-Helmhout (2007) found learning process variations influence innovations in manufacturing processes and product designs. This is a clear indication of the need for empirical studies on the relationship between knowledge, organizational learning and action.

Sensemaking plays a vital role as both an individual and organizational conduit in the learning process (Thomas, Sussman and Henderson, 2001). This research area argues that managers' information processing activities determine how the firm behaves and ultimately performs (Daft and Weick, 1984; Thomas, Clark and Gioia, 1993). The importance of scanning (i.e. information gathering), interpretation and adaptive actions is pivotal to MNC performance. In fact, variations in information processing willingness and abilities can directly and indirectly impact financial performance (Thomas, Clark and Gioia, 1993). Therefore, sensemaking is a complementary theoretical base to test relationships between organizational learning and performance relating to an MNC's global marketing strategy.

Given the importance of knowledge and learning to competitive advantage, the performance measurement of an MNC should include learning, innovation and internal business processes that drive customer value (Yeniyurt, 2003). Yet, historically many managers and researchers have focused predominantly on profits and stock price as outcomes. In response, Kaplan and Norton (1992) developed a 'balanced scorecard' to capture cross-functional performance elements. This approach reflects how well an organization meets not only financial requirements, but also the need for customer service, innovation and learning, and improved internal processes (Srivastava, Shervani and Fahey, 1999). These are key marketing processes that can be measured by the balanced scorecard. A firm that succeeds along each of these dimensions

is well positioned to capture a sustainable competitive advantage (Kaplan and Norton, 1996). This is particularly true for MNCs, which encounter a wide array of customer, innovation and value chain uncertainties.

Since the balanced scorecard's introduction, it has become an alternative set of performance metrics (Niven, 2002; Olson and Slater, 2002). Many studies have focused on the relationship between the four balanced scorecard performance measures: learning and innovation, internal processes, customer performance and financial performance (Hoque, 2004; Olson and Slater, 2002). In fact, a recent study found that MNC nationality can influence information management and balanced scorecard performance measurement (Chung, Gibbons and Schoch, 2006).

However, the exact influence of the balanced scorecard on global strategic advantage has yet to be examined. In fact, the balanced scorecard has evolved to become a performance diagnostic tool for strategic planning at the business and functional levels (Kaplan and Norton, 2001). Studies have discussed the balanced scorecard in similar functional areas such as supply chain management (Brewer and Speh, 2000), but such attempts typically have not related the topic to extant theory or the unique conditions of global marketing and the MNC. Therefore, we use the balanced scorecard as a framework to assess the

influence of organizational learning and sense-making actions in this context. Our study has three objectives: (1) to examine the effect of organizational learning on global marketing strategy through sensemaking; (2) to assess outcomes of a global strategy through the four components of the balanced scorecard; and (3) to determine the influence of international experience and diversification on learning and global marketing outcomes. We discuss the study's conceptual development and hypotheses in the next section.

Conceptual development and hypotheses

Drawing from the KBV and sensemaking, Figure 1 details the central role of shared interpretation in linking knowledge management and balanced scorecard performance outcomes. The model contains eight variables (organizational memory, information acquisition, information distribution, shared interpretation, customer performance, innovation and learning performance, internal process performance, and financial performance).

Links among knowledge management variables

In the proposed model, organizational memory is the fundamental element of knowledge manage-

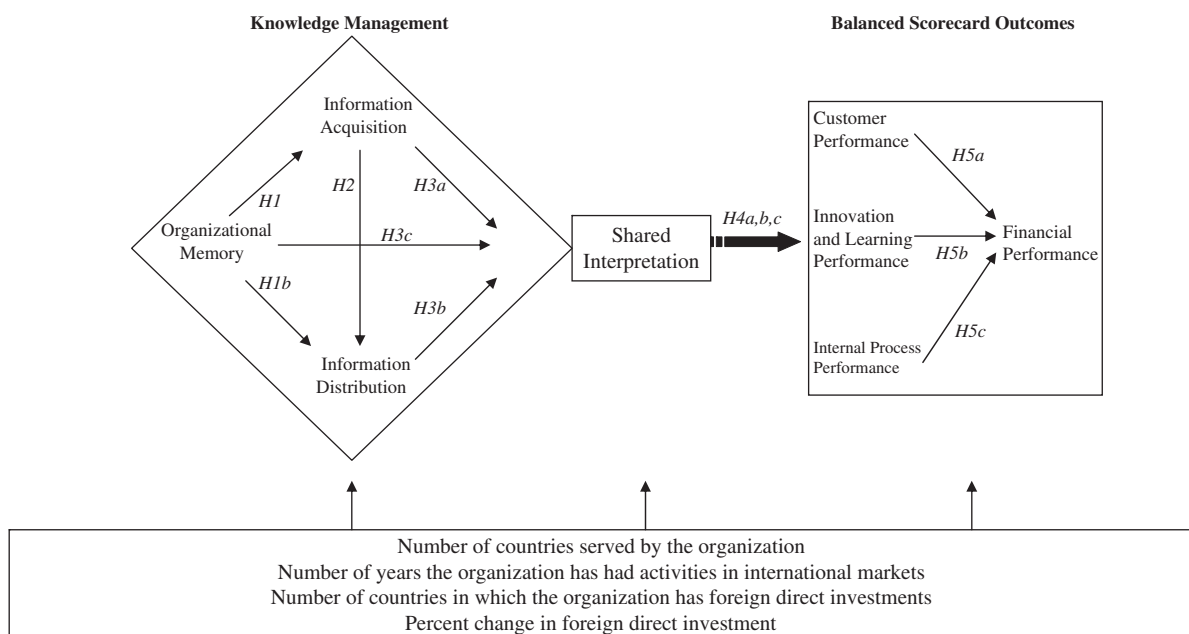


Figure 1. A model of knowledge management and balanced scorecard outcomes in MNCs

ment affecting both information acquisition and information distribution. Organizational memory refers to the extent that firms value learning from experience, sharing those learnings throughout the organization and developing processes to access the lessons learned (Huber, 1991). The KBV and organizational learning research highlights the importance of memory to information processing in organizations (Birkinshaw, Toulan and Arnold, 2001). This mechanism provides a frame of reference, routines and structures that reflect and focus stored knowledge (Hedberg, 1981; Huber, 1991; Moorman, 1995; Moorman and Miner, 1997). In fact, Day (1994) indicates that organizations without a practical mechanism to remember the reasons for successes must repeat learning. As a result, this repetitive learning can adversely impact performance. Memory mechanisms are needed to ensure that lessons are properly captured, conserved, accessible and, most importantly, can serve as input to future information processing (Slater and Narver, 1995). This should also be the case for MNCs to promote learning within subsidiaries (e.g. Hong, Easterby-Smith and Snell, 2006). Thus:

H1: Organizational memory is positively related to (a) information acquisition and (b) information distribution in MNCs.

Support for the influence of information acquisition on information distribution is provided by learning-based research. Previous studies forward that 'for an organization to adapt to market needs, market intelligence must be communicated, disseminated, and perhaps even sold to relevant departments and individuals in the organization' (Kohli and Jaworski, 1990, p. 5). Thus, subsidiaries may be better able to identify and respond to competitor actions in their own markets.

Similar support suggests that 'there is an ordering among the various types of intelligence, with generation naturally occurring to a greater degree than what is disseminated' (Kohli, Jaworski and Kumar, 1993, p. 473). In fact, not all market information stored and distributed by MNCs may be valuable. However, previous literature clearly indicates that information acquisition is a necessary prerequisite for distribution (Kohli, Jaworski and Kumar, 1993; Maltz and Kohli, 1996). In the same way, it is essential for MNCs to acquire information about the marketplace, customers and competitors, but

also to transmit relevant information to subsidiaries. This implies a greater degree of information distribution after it is acquired. Therefore, we predict that

H2: Information acquisition is positively related to information distribution in MNCs.

Building on Huber (1991) and Sinkula (1994), shared interpretation has been suggested as pivotal to information processing. This is the point at which information is transformed into knowledge by developing a common interpretation and actions that lead to competitive behaviours. Research in the organizational information processing literature asserts that participants holding diverse views develop enough commonality to act while avoiding excessive time to achieve total and complete consensus on meaning (Gioia and Mehra, 1996). In support of this, some researchers argue that 'dialogue and joint action are crucial to the development of shared understanding' (Crossan, Lane and White, 1999, p. 525). High performing firms in dynamic and complex markets strive for shared interpretation to assure effective strategy implementation (Dess and Origer, 1987). As such, information becomes meaningful as a consequence of the evaluated schemas to process and assess it through interpretive processes (Ellis and Shpielberg, 2003). Without consensus on the meaning of the information, neither learning nor knowledge building can occur (Day, 1994).

This skill to arrive at information interpretation and distribution can be effectively accomplished by MNCs. For global marketing processes such as product design, subsidiaries that adopt a proactive orientation to seek internal and external market research are typically more receptive to global integration (Saka-Helmhout, 2007). Only after information on current marketplace conditions has been acquired and distributed can a common interpretation be reached and acted upon. Thus:

H3a: Information acquisition is positively related to shared interpretation in MNCs.

H3b: Information distribution is positively related to shared interpretation in MNCs.

Huber (1991) also contends that shared interpretation (i.e. the extent to which participants develop common understandings about data and

events) depends on organizational memory. The underlying notion is that memory provides a frame of reference (or cognitive map) that serves as a guide toward common understandings in the organization. No doubt, the ability of MNCs to develop organizational memory that leads to shared interpretation may vary considerably. Nevertheless, the development of a global marketing strategy (e.g. Zou and Cavusgil, 2002) is more easily attained after sufficient experience.

Therefore, effective integration of 'new' and 'old' knowledge is likely when a high level of effective organizational memory has been established. For example, international joint venture partners with high existing knowledge of managerial and marketing expertise benefit from training by the parent firm (Lane, Salk and Lyles, 2001). The breadth of organizational memory that MNCs develop over time can prove to be quite important for interpreting information. Thus, we expect:

H3c: Organizational memory is positively related to shared interpretation in MNCs.

Shared interpretation and global marketing actions

Information processing activities within MNCs have long been of interest to researchers (e.g. Egelhoff, 1982), but little is known about how these activities relate to the balanced scorecard. Our previous hypotheses predicted a sequence among information processing activities. We build on the general theme offered by the sensemaking literature to forward the relationship between shared interpretation and three balanced scorecard outcomes relating to adaptive change.

One theme of the sensemaking literature is that skilful information processing provides the basis for thoughtful firm behaviours. The ability of a firm to better organize and coordinate productive activities allows it to adapt to changes in the marketplace and become more competitive (McEvily, Das and McCabe, 2000). Since such behaviours provide a good fit with the requirements of the competitive environment, they often produce enhanced outcomes (Child, 1972). Many studies have supported this notion to indicate that competitive interpretation processes and information usage enhance performance (Ketchen, Thomas and McDaniel, 1996; Thomas, Clark and Gioia, 1993). For improved performance, MNCs usually adopt global integration strategies

that require changes, contributions and support from subsidiaries and headquarters.

The customer, innovation and learning, and internal process perspectives of the balanced scorecard provide an effective structure to assess the adaptive changes needed for a successful global marketing strategy (Kaplan and Norton, 2001). Considerably different from previous research, this study posits that shared interpretation is an important link between information processing activities and balanced scorecard outcomes focusing on adaptive change and competitive marketing-based processes (Srivastava, Shervani and Fahey, 1999). This perspective is based on the notion that knowledge understanding and implementation based on developed knowledge is more valuable to the MNC than information not interpreted (Grant, 1996). Therefore, we expect that shared interpretation has a positive effect on all three intermediate balanced scorecard outcomes:

H4: Shared interpretation is positively related to (a) customer performance, (b) innovation and learning performance and (c) internal process performance in MNCs.

Global marketing actions and financial performance

Financial performance is the definitive dependent variable in our model. It is included to reflect the sentiment that 'paths from all the measures on a scorecard should be linked to financial objectives' (Kaplan and Norton, 1996, p. 36). Indeed, as discussed extensively in previous research, profitability is the key to a firm's ability to remain a viable entity and satisfy its shareholders (Lovett and MacDonald, 2005). Research shows that the priority of the perspectives varies by strategy and nationality, but greater emphasis is usually on financial performance (Chung, Gibbons and Schoch, 2006; Olson and Slater, 2002). Therefore, customer, innovation and learning, and internal process performance are viewed as intermediate, positional outcomes that facilitate financial performance (Srivastava, Shervani and Fahey, 1999). Thus, we expect that

H5: Financial performance is positively influenced by (a) customer performance, (b) innovation and learning performance and (c) internal process performance in MNCs.

Method

Sample

We drew a random sample of 1000 MNCs from Dun and Bradstreet. One senior executive in one small business unit (SBU) that was representative of the MNC's operations was targeted as a key informant. This followed Huber and Power's (1985) guidelines on eliciting quality data from single informants. A request for survey participation was relayed via email to each potential respondent and the survey was posted online. An original email and a follow-up request two weeks after the initial contact were sent to encourage participation. Each email included a description of the study, a hyperlink to the survey, a promise of response anonymity, and an option to receive a report of the findings. Fifty-seven surveys were discarded (i.e. discontinued employment, wrong address, or participation refusal). We received 169 usable responses. Thus, the overall response rate was 17.9% (169/943).

All 169 SBUs had an international scope. They were on average 43.7 years old, operated in 8.93 countries, were operating internationally for 13.1 years, had foreign direct investment in 1.5 countries, and had increased foreign direct investment by 4.26% in the last year. The extrapolation procedure suggested by Armstrong and Overton (1977) was used to assess non-response bias based on data provided by the respondents. No significant differences were found between the early quartile ($n = 42$) and the late quartile ($n = 42$) of respondents.

Measures

Previously used scales were adapted to measure organizational memory, information acquisition and information distribution within the context of global marketing. New scales were developed and purified to measure shared interpretation and the balanced scorecard outcomes. Details on the measures used are provided in the Appendix. The study's important statistics and measurement analysis results are presented in Tables 1 and 2.

Common method variance. All items used to test our hypotheses are based on executives' judgments, so it was important to examine if common method variance exists. As such, the items were factor analysed to determine if one single factor would emerge or if one general factor would account for most of the covariance in the variables (Podsakoff and Organ, 1986). Based on the results, common method bias does not appear to be an inhibiting factor.

Confirmatory factor analysis. Next, the eight latent constructs involving 38 items were evaluated in a confirmatory factor analysis (CFA) using LISREL 8.54 (Jöreskog *et al.*, 2000). The DELTA2 index (or IFI) (Bollen, 1989), relative non-centrality index (RNI) (McDonald and Marsh, 1990) and comparative fit index (CFI) (Bentler, 1990) have been shown to be the most stable fit indices (Gerbing and Anderson, 1992). Our results indicate that the CFA model provided a good fit, with DELTA2 (or IFI), RNI and CFI all at 0.98. Additionally, the measure-

Table 1. Means, standard deviations and correlations^a

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Organizational memory	3.68	1.62											
2. Information acquisition	3.14	1.59	0.68										
3. Information distribution	3.47	1.68	0.64	0.82									
4. Shared interpretation	3.14	1.66	0.55	0.74	0.77								
5. Customer performance	4.10	1.81	0.49	0.64	0.63	0.62							
6. Innovation/learning performance	3.70	1.70	0.45	0.63	0.63	0.66	0.81						
7. Internal process performance	3.77	1.68	0.51	0.57	0.63	0.66	0.82	0.88					
8. Financial performance	3.72	1.86	0.41	0.47	0.50	0.55	0.79	0.71	0.74				
9. Countries	8.93	18.03	0.16	0.09	0.00	0.07	0.23	0.02	0.15	0.12			
10. Years in international markets	13.09	18.20	0.26	0.29	0.23	0.13	0.34	0.28	0.25	0.16	0.38		
11. FDI in number of countries	1.49	5.31	0.05	-0.06	-0.12	-0.12	0.00	-0.12	0.07	0.06	0.71	0.16	
12. Percent change in FDI	4.26	17.37	0.12	0.09	0.10	0.03	0.01	0.12	0.11	-0.06	0.06	0.05	0.03

FDI, foreign direct investment.

^aAll correlations ≥ 0.16 are significant at the $p < 0.05$ level.

Table 2. Summary statistics of CFA

Construct	Average variance extracted	Reliability coefficient	Factor loadings range
Organizational memory	81.00%	0.94	0.81–0.97
Information acquisition	76.83%	0.95	0.77–0.92
Information distribution	72.20%	0.93	0.75–0.92
Shared interpretation	81.00%	0.97	0.89–0.96
Customer performance	77.50%	0.93	0.84–0.92
Innovation and learning performance	84.75%	0.96	0.88–0.99
Internal process performance	82.50%	0.95	0.93–0.96
Financial performance	88.25%	0.97	0.95–0.99

Fit statistics

DELTA2 (IFI) = 0.98

RNI = 0.98

CFI = 0.98

RMSEA = 0.05

Unconstrained model $\chi^2_{(54)} = 1404.58$ Constrained model $\chi^2_{(55)} = 1428.31$ $\Delta\chi^2_{(1)} = 23.73$

ment model's root mean squared error of approximation (RMSEA) was computed at 0.05 and is considered acceptable (Hair *et al.*, 1995; Hu and Bentler, 1999).

Reliability and validity. Composite reliability was calculated using the procedures outlined by Fornell and Larcker (1981) and ranged from 0.93 to 0.97. The factor loadings ranged from 0.75 to 0.99 ($p < 0.01$). The average variances extracted ranged from 72.20% to 88.25%.

Although the CFA assessment was supportive of discriminant validity among the measures, one additional test was conducted given the relatively high correlations between some constructs. Specifically, discriminant validity was determined following the guidelines of Anderson (1987) and Bagozzi and Phillips (1982). This test analysed all possible pairs of constructs in a series of two-factor CFA models using LISREL. Each model was run twice – once constraining the ϕ coefficient to unity and once freeing this parameter. A χ^2 -difference test was then performed on the nested models to assess if the χ^2 values were significantly lower for the unconstrained models (Anderson and Gerbing, 1988). The critical value ($\Delta\chi^2_{(1)} > 3.84$) was exceeded in all cases.

Analysing these two scales simultaneously, the unconstrained model (U) resulted in a

$\chi^2 = 1404.58$, $df = 54$, while the constrained model (C) resulted in a $\chi^2 = 1428.31$, $df = 55$. As such, $\Delta\chi^2_{(1)} = 23.73$ resulted when comparing the U and C models. Hence, although high bivariate correlations exist, the constructs exhibit discriminant validity.

Analysis and results

The hypotheses were tested using hierarchical regression with the control variables entered in step one and predictors entered in step two of each analysis. This method was employed because the overall objective of this study was to test the relationships forwarded controlling for variables specific to MNCs. Each variable was standardized (mean-centred) to minimize potential multicollinearity problems (Cohen *et al.*, 2003). Mediation testing was conducted to test the direct effect of knowledge management on balanced scorecard outcomes (Baron and Kenny, 1986). Results indicate that the relationships hypothesized in this study specify appropriate mediation effects. In addition, the variance inflation factors (VIFs) of the scales used were well below 5, thus indicating that multicollinearity is probably not an issue for concern.

For each equation in Table 3, the adjusted R^2 is the total variance in the dependent variable explained taking into account the number of predictor variables and the sample size. R^2 increase refers to the variance explained by the predictor variables beyond what is explained only by the control variables. Each R^2 increase was statistically significant ($p < 0.01$), meaning that the hypothesized predictors in each model explained a significant additional portion of the variance beyond the control variables.

Relationships among knowledge management variables

Hypothesis 1a predicted a positive link between organizational memory and information acquisition. In support, the relationship was positive and significant ($\beta = 0.65$, $p < 0.01$). Hypotheses 1b and 2 stated that organizational memory and information acquisition have positive links with information distribution. Organizational memory ($\beta = 0.16$, $p < 0.01$) and information acquisition ($\beta = 0.71$, $p < 0.01$) both had positive links with

Table 3. Consolidated standardized regression results

<i>Knowledge management hypotheses</i>				
	Information acquisition	Information distribution	Shared interpretation	
Information acquisition		0.71**	0.31**	
Information distribution			0.52**	
Organizational memory	0.65**	0.16**	0.02	
Countries	0.02	-0.06	0.22**	
Years in international markets	0.13*	0.01	-0.14**	
FDI in number of countries	-0.12	-0.04	-0.17*	
Percent change in FDI	0.01	0.02	-0.05	
Adjusted R ²	0.47	0.68	0.64	
R ² increase	0.39**	0.61**	0.59**	
Hypotheses supported	1a	1b, 2	3a, 3b	
Hypotheses not supported			3c	
<i>Shared interpretation and balanced scorecard hypotheses</i>				
	Customer performance	Innovation/learning performance	Internal process performance	Financial performance
Customer performance				0.64**
Innovation/learning performance				0.14
Internal process performance				0.13
Shared interpretation	0.25**	0.42**	0.47**	0.13
Organizational memory	0.01	-0.03	0.12	0.08
Information acquisition	0.20	0.19	-0.07	-0.17
Information distribution	0.24*	0.12	0.23*	-0.04
Countries	0.21*	-0.08	-0.07	-0.14
Years in international markets	0.13*	0.18**	0.13*	-0.08
FDI in number of countries	-0.10	-0.02	0.17*	0.18*
Percent change in FDI	-0.05	-0.08	0.06	-0.08
Adjusted R ²	0.50	0.49	0.49	0.67
R ² increase	0.02**	0.06**	0.08**	0.34**
Hypotheses supported	4a	4b	4c	5a
Hypotheses not supported				5b, 5c

Notes: All standardized beta coefficients have VIFs below 5. Standardized coefficients of control variables are in bold. FDI, foreign direct investment. *p < 0.05; **p < 0.01.

information distribution; thus, Hypotheses 1b and 2 were supported. Hypotheses 3a, 3b and 3c involved shared interpretation as the criterion variable with the other knowledge development variables having direct relationships. Information acquisition ($\beta = 0.31$, $p < 0.01$) and information distribution ($\beta = 0.52$, $p < 0.01$) had confirmed associations with shared interpretation while organizational memory did not ($\beta = 0.02$). Thus, Hypotheses 3a and 3b were supported, but 3c was rejected.

Relationships between shared interpretation and balanced scorecard variables

Three models were examined to assess the relationship between shared interpretation and customer, innovation and learning, and internal process performance. First, we found that shared

interpretation had a positive influence on customer performance ($\beta = 0.25$, $p < 0.01$). Second, we discovered that shared interpretation had a positive link with innovation and learning performance ($\beta = 0.42$, $p < 0.01$). Lastly, we found that shared interpretation had a positive influence on internal process performance ($\beta = 0.47$, $p < 0.01$). As such, Hypotheses 4a, 4b and 4c were all supported.

Relationships among balanced scorecard variables

The final model assessed the influence of customer, innovation and learning, and internal process performance on financial performance (Hypotheses 5a, 5b and 5c). We found a significant and positive relationship between customer performance and financial performance ($\beta = 0.64$, $p < 0.01$), but the links to financial

performance involving innovation and learning performance ($\beta = 0.14$) and internal process performance ($\beta = 0.13$) were not statistically significant. Thus, Hypothesis 5a was supported, but 5b and 5c were rejected.

Discussion

This study's objective was to explore the relationship between knowledge management and balanced scorecard outcomes in the global marketing context. More specifically, our research contributes to the literature by assessing the global nature of balanced scorecard performance measures in MNCs. The tested model explains substantial variance in customer, innovation and learning, internal process, and financial performance. The support found for many of the hypotheses bolsters theory development concerning knowledge management and MNC performance, while the lack of support for other hypotheses emphasizes the need for additional investigation. Below, we discuss some of the study's theoretical and practical implications.

Links among knowledge management variables

To examine the influence of organizational learning on global marketing strategy, shared interpretation is the key variable in this model as it represents the stage where information is translated into knowledge (Daft and Weick, 1984). The results related to the initial hypotheses provide understanding of how knowledge is created in MNCs by analysing the components of knowledge management in an overall model. Hypotheses 1a and 1b were supported, providing evidence in favour of our depiction of organizational memory as the starting point of the knowledge management process in MNCs. Specifically, organizational memory was positively associated with both information acquisition and distribution. In turn, information acquisition (3a) and information distribution (3b) helped shape shared interpretation. Interestingly, organizational memory had no direct link with interpretation (3c). This may be due to the rigid nature of relying on only organizational memory to make decisions.

Our findings indicate that international experience and diversification have contradictory influ-

ences on this study's organizational learning variables. Consistent with internationalization theory, the years in international markets is positively associated with information acquisition. However, a negative relationship exists with shared interpretation. This suggests that developing common interpretations across subsidiaries may be more difficult in firms that initially adopted a multi-domestic marketing strategy. The results show that the influence of international diversification on shared interpretation depends on the type of involvement. The number of countries served is positively associated with shared interpretation, suggesting that knowledge of diverse cultures and markets can facilitate a common understanding of market information. Based on the MNC context of our study, this relationship is expected. Also, our findings indicating a negative relationship between the number of countries with foreign direct investment and shared interpretation is consistent with studies showing that knowledge coordination among headquarters and subsidiaries can be complex (Johansson and Yip, 1994; Minbaeva *et al.*, 2003).

Knowledge management and balanced scorecard outcomes

Previous research provided some evidence linking interpretation, action and performance (Gioia and Chittipeddi, 1991; Meyer, 1982). Our study adds an important cross-national element to this literature by identifying a similar relationship in MNCs and measuring outcomes of a global marketing strategy through the balanced scorecard. Specifically, we found support for the predictions of Hypotheses 4a, 4b and 4c that shared interpretation influences customer, innovation and learning, and internal process performance. By assessing global marketing actions through competitive-based marketing outcomes, these findings extend the sensemaking literature's contention that skilful knowledge development facilitates thoughtful and competitive firm behaviours (e.g. Thomas, Gioia and Ketchen, 1997). Also, these results suggest that information gathering, distribution and synthesis can aid in facilitating performance as measured by the balanced scorecard.

Our final set of hypotheses predicted an association between financial performance and

customer (5a), innovation and learning (5b) and internal process performance (5c). No support was found for the expected relationships involving innovation and learning performance (5b) or internal process performance (5c). It is important to note that all outcome measures focused on improvement from the previous year. One possible explanation for the lack of support is that the incremental nature of our measurement may have precluded any possible relationship. In fact, innovation and learning projects in MNCs sometimes take considerably longer than the time period tested here (Cooper, 2001). Therefore, the study of both innovation and learning performance as well as internal process performance may require more time to derive any definitive conclusions.

In contrast, the relationship between customer performance and financial performance was supported. It is reasonable to suspect that the financial gains of improved customer outcomes accrue more quickly because sales and profits are closely intertwined and can be directly measured. More broadly, our findings concerning 5a also lend support to the market orientation literature's contention that devotion to satisfying customers' needs is central to profitability (Narver and Slater, 1990). Overall, our mixed findings concerning financial performance indicate that further investigation is warranted.

Nevertheless, the contribution of this study furthers previous findings concerning the importance of marketing strategy standardization and global account management to MNC performance (Birkinshaw, Toulan and Arnold, 2001; Katsikeas, Samiee and Theodosiou, 2006).

Strategic marketing research has studied the interdisciplinary nature of performance (Vorhies and Morgan, 2003, 2005). In fact, previous research exploring the multifaceted nature of performance has emphasized specific conditions similar to those encountered by MNCs. For instance, performance related to strategic, economic, selling and customer-focused objectives have been found to be key measures for exporting manufacturers and international channel relationships (Bello and Gilliland, 1997; Cavusgil and Zou, 1994; Morgan, Kaleka and Katsikeas, 2004). Also, research has renewed its emphasis on the multidimensional nature of international strategic alliance performance (Robson, Katsikeas and Bello, 2008).

As a result, our findings are consistent with extant literature on this topic. However, we synthesize, formalize and advance these perspectives by directly applying the balanced scorecard framework to the context of MNC international and global marketing strategy. Thus, this study provides a more detailed understanding of the relationship between MNC strategic and financial performance.

Post hoc analysis of balanced scorecard outcomes

One reason that Hypotheses 5b and 5c were not supported may be based on the complex relationship which exists among balanced scorecard outcomes. In fact, an alternative approach proposes testing the balanced scorecard in the following order: (1) innovation and learning; (2) internal processes; (3) customer emphasis; and (4) financial performance (Church and Smith, 2007; Kaplan and Norton, 2000; Möller and Schaltegger, 2005). The results of testing these relationships within the context of our study are provided in Table 4.

Interestingly, this alternative is supported in our study. Similar to our hypothesized results, the role of shared interpretation appears pivotal as a link between knowledge management and the balanced scorecard. The positive and significant influence of shared interpretation on innovation/learning performance ($\beta = 0.42$, $p < 0.01$) provides an indication of its importance. Then, innovation/learning performance appears to have a positive and significant influence on internal process performance ($\beta = 0.82$, $p < 0.01$). Also, the influence of internal process performance on customer performance was positive and significant ($\beta = 0.45$, $p < 0.01$). Finally, customer performance had a positive influence on financial performance ($\beta = 0.64$, $p < 0.01$). This provides considerable support for future comparative assessments of balanced scorecard outcomes.

Our results also appear to juxtapose the nature of each balanced scorecard outcome when applying this framework in global marketing research. For instance, information acquisition was found to have a negative influence on internal process performance ($\beta = -0.22$, $p < 0.01$), but it positively influenced customer performance ($\beta = 0.18$, $p < 0.05$). This appears to be indicative of the differences between an

Table 4. Consolidated post hoc analysis

	Innovation/learning performance	Internal process performance	Customer performance	Financial performance
Customer performance				0.64**
Internal process performance			0.45**	0.13
Innovation/learning performance		0.82**	0.30**	0.14
Shared interpretation	0.42**	0.13*	-0.09	0.13
Organizational memory	-0.03	0.14**	-0.03	0.08
Information acquisition	0.19	-0.22**	0.18*	-0.17
Information distribution	0.12	0.13*	0.10	-0.04
Countries	-0.08	-0.01	0.27**	-0.14
Years in international markets	0.18**	-0.02	0.02	-0.08
FDI in number of countries	-0.02	0.18**	-0.17**	0.18*
Percent change in FDI	0.08	-0.01	-0.10**	-0.08
Adjusted R ²	0.49	0.83	0.76	0.67
R ² increase	0.06**	0.32**	0.03**	0.09**

Notes: All standardized beta coefficients have VIFs below 5. Standardized coefficients of control variables are in bold. FDI, foreign direct investment.

* $p < 0.05$; ** $p < 0.01$.

internal and external focus. Based on these findings, unless information from the marketplace has a direct impact on an MNC's internal processes, it provides little value. However, since information is an element to understanding customers, competitors and the marketplace, its importance has been indicated, as well.

Another comparison indicates potentially conflicting findings. In fact, the number of countries in which an MNC has foreign direct investment had a positive influence on internal process performance ($\beta = 0.18$, $p < 0.01$) and financial performance ($\beta = 0.18$, $p < 0.05$), but it also appeared to have a negative relationship with customer performance ($\beta = -0.17$, $p < 0.01$). This seems to relate to the different requirements for each outcome. For instance, internal processes and immediate financial performance may benefit most from direct efficiencies in an MNC's foreign direct investment. These benefits can sometimes be measurable in the form of cost reductions and total quality management programmes. In contrast, such investments may limit the opportunities for customer acquisition, satisfaction and retention on a global scale.

Limitations

Our results should be viewed in light of the study's limitations, as well. The use of a cross-sectional design precludes any definitive statements concerning causality or tests of potential feedback loops. Given the nature of perceptual

data with a single source of information, some degree of common method bias may exist that was undetected. Recognizing it has limitations, we used the single-factor method given that subjective data have been used in numerous cross-sectional studies.

While the use of multiple informants per organization might have provided additional insights, given the 17.9% response rate, a design requiring two respondents per firm would probably have resulted in a very small sample size (e.g. $1000 \times 0.179 \times 0.179 = 32$ MNCs). As a result, the statistical power of this study would have been negligible and few conclusions could be made concerning balanced scorecard outcomes. In addition, the use of objective, secondary measures for key outcomes would have enhanced our design.

Directions for future research

Despite this study's limitations, there are at least four directions that can be identified for future research. First, in hypercompetitive cross-national markets, researchers have indicated that traditional sensemaking frameworks may not be applicable (Bogner and Barr, 2000). The rapid market changes inherent in these industries lead some to speculate that the sensemaking processes bringing success are more similar among high performance firms. We contribute to and extend the sensemaking literature within the context of

MNCs. Future research should further pursue the boundaries of applicable sensemaking frameworks within cross-national contexts.

Second, we can infer from our hypothesized results that only customer performance influenced financial performance. As suggested by the *post hoc* analysis, other performance measures may influence financial performance under different conditions. The mixed relationship of international experience and diversification on learning and outcomes highlights a need for further research. For example, the SBUs surveyed had over a decade of international experience. Among so-called 'born global' firms (Autio, Sapienza and Almeida, 2000; Oviatt and McDougall, 1994), findings may lead to alternative conclusions. Given that innovation, learning and internal processes may be particularly important for firms new to the international competitive landscape, subsequent studies could find that other balanced scorecard outcomes may influence financial performance instead.

Third, the relationships discovered among the balanced scorecard outcomes in our *post hoc* analysis indicate a complex relationship that requires continued research. The hypothesized results supported the influence of shared interpretation on immediate balanced scorecard outcomes (Hypotheses 4a, 4b and 4c). However, by testing an alternative, sequential application, the *post hoc* results indicate that considerable research must still be conducted to reconcile the interrelation of balanced scorecard outcomes.

Lastly, as with many MNCs, the national cultures in which they operate may influence operations and interpretation to some degree (Chung, Gibbons and Schoch, 2006). In fact, cultural factors (e.g. Hofstede, 1980) have been posited as important in the information generation, dissemination and utilization process (Nakata and Sivakumar, 2001). Thus, advanced study concerning the impact of national culture on the knowledge management process as well as balanced scorecard outcomes could prove an insightful research topic.

Conclusion

Our study addresses two trends relating to MNCs: (1) the need to integrate globally to achieve competitive performance; and (2) the

emergence of the balanced scorecard as an alternative performance framework. Recognizing that knowledge management is considered critical to the adoption of a global marketing strategy, we draw on the KBV, sensemaking and organizational learning literatures to develop a model explaining influences on balanced scorecard outcomes among 169 MNCs.

For researchers, our model tested a more comprehensive set of constructs than would have been possible relying on any individual theoretical tradition. Therefore, we synthesize these three traditions to explain the relationship between knowledge management and firm outcomes. For managers, deciding how to allocate limited time and attention is a key challenge. Our results imply that shared interpretation and a focus on the customer appear to be the most important elements for immediate financial success. As the *post hoc* analysis indicated, more study is needed to effectively determine the complex relationship among balanced scorecard outcomes.

Appendix

Measures

Note: All measures used a Likert-type format ranging from 'strongly disagree' (= 1) to 'strongly agree' (= 7) except for the control variables which were measured as indicated below.

Organizational memory (adapted from Moorman and Miner, 1997)

We have a great deal of knowledge about the global marketplace.

We have a great deal of experience with the global marketplace.

We have a great deal of familiarity with the global marketplace.

We have invested a great deal of research and development related to the global marketplace.

Information acquisition (adapted from Kohli, Jaworski and Kumar, 1993)

We meet regularly to generate information on what products our global customers will need in the future.

We do a lot of in-house research to generate product information relevant to our global customers' needs.

We are fast to generate information about changes in our global customers' product preferences.

We poll end users regularly to generate information on the quality of our global products.

We are fast to generate information about fundamental global shifts in our industry.

We regularly generate information about the likely effect of changes in our business environment on our global customers.

Information distribution (adapted from Kohli, Jaworski and Kumar, 1993)

We have regular interdepartmental meetings to disseminate information regarding global product trends.

We regularly disseminate information regarding future global product offerings.

When something important happens to a major global customer or market, the whole organization knows about it in a short period.

Data on customer satisfaction globally are disseminated at all levels in our organization on a regular basis.

When something important happens regarding global competitors, we disseminate that information quickly to all parts of our organization.

Shared interpretation (new scale based on Huber, 1991)

We develop a shared understanding of global market information across organizational units.

We have a procedure to develop a shared understanding of available global market information.

We develop a shared understanding of the implications of a global market activity.

We have a system to develop a shared understanding of global market information in a meaningful way.

We develop a shared understanding of global market information to reduce its complexity.

We have a mechanism to develop a shared understanding of new global market information.

We have a process to develop a shared understanding of global market information.

Balanced scorecard outcomes (new scales based on Kaplan and Norton, 1992, 1996)

Customer performance

We achieved a high degree of global customer satisfaction in the last year.

We kept a large number of existing global customers in the last year.

We attracted a significant number of new global customers in the last year.

We secured a large portion of our desired global market share in the last year.

Innovation and learning performance

We significantly enhanced our global marketing strategy skills compared with last year.

We significantly enhanced our global marketing implementation skills compared with last year.

We significantly enhanced our global marketing research skills compared with last year.

We significantly enhanced our global product development skills compared with last year.

Internal process performance

The speediness of our global marketing processes improved in the last year.

The quality of our global marketing processes improved in the last year.

The cost of our global marketing processes improved in the last year.

The flexibility of our global marketing processes improved in the last year.

Financial performance

We achieved global revenues above our stated objective in the last year.

We achieved global sales above our stated objective in the last year.

We achieved global return on investments above our stated objective in the last year.

We achieved global return on assets above our stated objective in the last year.

Control variables (based on work by Barkema, Bell and Pennings, 1996; Johanson and Vahlne, 1977; Melin, 1992)

How many countries does your organization serve?

How many years has your organization had activities in international markets?

In how many countries does your organization have foreign direct investments?

What was your percent change in foreign direct investment in the last year?

References

- Ambos, T. C., B. Ambos and B. B. Schlegelmilch (2006). 'Learning from foreign subsidiaries: an empirical investigation of headquarters' benefits from reverse knowledge transfers', *International Business Review*, **15**, pp. 294-312.

- Anderson, J. C. (1987). 'An approach for confirmatory measurement and structural equation modeling of organizational properties', *Management Science*, **33**, pp. 525–541.
- Anderson, J. C. and D. W. Gerbing (1988). 'Some methods for respecifying measurement models to obtain unidimensional construct measurement', *Journal of Marketing Research*, **19**, pp. 453–460.
- Anh, P. T. T., C. C. Baughn, N. T. M. Hang and K. E. Neupert (2006). 'Knowledge acquisition from foreign parents in international joint ventures: an empirical study in Vietnam', *International Business Review*, **15**, pp. 463–487.
- Armstrong, J. S. and T. S. Overton (1977). 'Estimating nonresponse bias in mail surveys', *Journal of Marketing Research*, **14**, pp. 396–402.
- Autio, E., H. J. Sapienza and J. G. Almeida (2000). 'Effects of age at entry, knowledge intensity, and imitability on international growth', *Academy of Management Journal*, **43**, pp. 909–924.
- Bagozzi, R. P. and L. W. Phillips (1982). 'Representing and testing organizational theories: a holistic construal', *Administrative Science Quarterly*, **27**, pp. 459–489.
- Barkema, H. G., J. H. J. Bell and J. M. Pennings (1996). 'Foreign entry, cultural barriers, and learning', *Strategic Management Journal*, **17**, pp. 151–166.
- Baron, R. M. and D. A. Kenny (1986). 'The moderator–mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations', *Journal of Personality and Social Psychology*, **51**, pp. 1173–1182.
- Bartlett, C. A. and S. Ghoshal (1986). 'Tap your subsidiaries for global reach', *Harvard Business Review*, **64**, pp. 87–94.
- Bello, D. C. and D. I. Gilliland (1997). 'The effect of output controls, process controls, and flexibility on export channel performance', *Journal of Marketing*, **61**, pp. 22–38.
- Bentler, P. M. (1990). 'Comparative fit indexes in structural equation modeling', *Psychological Bulletin*, **107**, pp. 238–246.
- Birkinshaw, J., O. Toulan and D. Arnold (2001). 'Global account management in multinational corporations: theory and evidence', *Journal of International Business Studies*, **32**, pp. 231–248.
- Bogner, W. C. and P. S. Barr (2000). 'Making sense in hypercompetitive environments: a cognitive explanation for the persistence of high velocity competition', *Organization Science*, **11**, pp. 212–226.
- Bollen, K. A. (1989). *Structural Equations with Latent Variables*. New York: Wiley.
- Brewer, P. C. and T. W. Speh (2000). 'Using the balanced scorecard to measure supply chain performance', *Journal of Business Logistics*, **21**, pp. 75–93.
- Cavusgil, S. T. and S. Zou (1994). 'Marketing strategy–performance: an investigation of the empirical link in export market ventures', *Journal of Marketing*, **58**, pp. 1–21.
- Child, J. (1972). 'Organizational structure, environment, and performance: the role of strategic choice', *Sociology*, **6**, pp. 1–22.
- Chung, L. H., P. T. Gibbons and H. P. Schoch (2006). 'The management of information and managers in subsidiaries of multinational corporations', *British Journal of Management*, **17**, pp. 153–165.
- Church, K. S. and R. E. Smith (2007). 'An extension of the REA framework to support balanced scorecard information requirements', *Journal of Information Systems*, **21**, pp. 1–25.
- Cohen, J., P. Cohen, S. G. West and L. S. Aiken (2003). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*, 3rd edn. Mahwah, NJ: Lawrence Erlbaum.
- Cooper, R. G. (2001). *Winning at New Products: Accelerating the Process from Idea to Launch*, 3rd edn. Cambridge, MA: Perseus.
- Crossan, M. M., H. W. Lane and R. E. White (1999). 'An organizational learning framework: from intuition to institution', *Academy of Management Review*, **24**, pp. 522–537.
- Daft, R. L. and K. E. Weick (1984). 'Toward a model of organizations as interpretation systems', *Academy of Management Review*, **9**, pp. 284–295.
- Day, G. S. (1994). 'The capabilities of market-driven organizations', *Journal of Marketing*, **58**, pp. 37–52.
- Dess, G. G. and N. K. Origer (1987). 'Environment, structure, and consensus in strategy formulation: a conceptual integration', *Academy of Management Review*, **12**, pp. 313–330.
- Easterby-Smith, M. (1997). 'Disciplines of organizational learning: contributions and critiques', *Human Relations*, **50**, pp. 1085–1113.
- Egelhoff, W. G. (1982). 'Strategy and structure in multinational corporations: an information-processing approach', *Administrative Science Quarterly*, **27**, pp. 435–458.
- Ellis, S. and N. Shpielberg (2003). 'Organizational learning mechanisms and managers' perceived uncertainty', *Human Relations*, **56**, pp. 1233–1254.
- Fornell, C. and D. Larcker (1981). 'Evaluating structural equation models with unobservable variables and measurement error', *Journal of Marketing Research*, **18**, pp. 39–50.
- Gerbing, D. W. and J. C. Anderson (1992). 'Monte Carlo evaluations of goodness of fit indices for structural equation models', *Sociological Methods and Research*, **21**, pp. 132–160.
- Ghoshal, S. and C. A. Bartlett (1988). 'Creation, adoption, and diffusion of innovations by subsidiaries of multinational corporations', *Journal of International Business Studies*, **19**, pp. 365–388.
- Gioia, D. A. and K. Chittipeddi (1991). 'Sensemaking and sensegiving in strategic change initiation', *Strategic Management Journal*, **12**, pp. 433–448.
- Gioia, D. A. and A. Mehra (1996). 'Sensemaking in organizations', *Academy of Management Review*, **21**, pp. 1226–1240.
- Grant, R. M. (1996). 'Toward a knowledge-based theory of the firm', *Strategic Management Journal*, **17** (Special Issue), pp. 109–122.
- Hair, J. F., R. E. Anderson, R. L. Tatham and W. C. Black (1995). *Multivariate Data Analysis*, 4th edn. Upper Saddle River, NJ: Prentice Hall.
- Hedberg, B. L. T. (1981). 'How organizations learn and unlearn'. In P. C. Nystrom and W. H. Starbuck (eds), *Handbook of Organizational Design*, pp. 8–27. New York: Oxford University Press.
- Hedlund, G. (1994). 'A model of knowledge management and the n-form corporation', *Strategic Management Journal*, **15**, pp. 73–90.
- Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-Related Values*. Beverly Hills, CA: Sage.
- Hong, J. F. L., M. Easterby-Smith and R. S. Snell (2006). 'Transferring organizational learning systems to Japanese subsidiaries in China', *Journal of Management Studies*, **43**, pp. 1027–1058.

- Hoque, Z. (2004). 'A contingency model of the association between strategy, environmental uncertainty and performance measurement: impact on organizational performance', *International Business Review*, **13**, pp. 485–502.
- Hu, L. and P. M. Bentler (1999). 'Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives', *Structural Equation Modeling*, **6**, pp. 1–55.
- Huber, G. P. (1991). 'Organizational learning: the contributing processes and the literatures', *Organization Science*, **2**, pp. 88–115.
- Huber, G. P. and D. J. Power (1985). 'Retrospective reports of strategic-level managers: guidelines for increasing their accuracy', *Strategic Management Journal*, **6**, pp. 171–180.
- Johanson, J. and J. Vahlne (1977). 'The internationalization process of the firm: a model of knowledge development and increasing foreign market commitments', *Journal of International Business Studies*, **8**, pp. 23–32.
- Johansson, J. K. and G. S. Yip (1994). 'Exploiting globalization potential: U.S. and Japanese strategies', *Strategic Management Journal*, **15**, pp. 579–601.
- Jöreskog, K. G., D. Sörbom, S. Du Toit and M. Du Toit (2000). *LISREL 8: New Statistical Features*, 2nd edn. Chicago, IL: Scientific Software International.
- Kaplan, R. S. and D. P. Norton (1992). 'The balanced scorecard: measures that drive performance', *Harvard Business Review*, **70**, pp. 71–79.
- Kaplan, R. S. and D. P. Norton (1996). *Translating Strategy into Action: the Balanced Scorecard*. Boston, MA: Harvard Business School Press.
- Kaplan, R. S. and D. P. Norton (2000). 'Having trouble with your strategy? Then map it', *Harvard Business Review*, **78**, pp. 167–176.
- Kaplan, R. S. and D. P. Norton (2001). 'Transforming the balanced scorecard from performance measurement to strategic management: Part I', *Accounting Horizons*, **15**, pp. 87–104.
- Katsikeas, C. S., S. Samiee and M. Theodosiou (2006). 'Strategy fit and performance consequences of international marketing standardization', *Strategic Management Journal*, **27**, pp. 867–890.
- Ketchen, D. J. Jr, J. B. Thomas and R. R. McDaniel Jr (1996). 'Process, content and context: synergistic effects on organizational performance', *Journal of Management*, **22**, pp. 231–257.
- Kohli, A. K. and B. J. Jaworski (1990). 'Market orientation: the construct, research propositions, and managerial implications', *Journal of Marketing*, **54**, pp. 1–18.
- Kohli, A. K., B. J. Jaworski and A. Kumar (1993). 'MARKOR: a measure of market orientation', *Journal of Marketing Research*, **30**, pp. 467–477.
- Lähteenmäki, S., J. Toivonen and M. Matilla (2001). 'Critical aspects of organizational learning research and proposals for its measurement', *British Journal of Management*, **12**, pp. 113–129.
- Lane, P. J., J. E. Salk and M. A. Lyles (2001). 'Absorptive capacity, learning, and performance in international joint ventures', *Strategic Management Journal*, **22**, pp. 1139–1161.
- Leonidou, L. C. and C. S. Katsikeas (1996). 'The export development process: an integrative review of empirical models', *Journal of International Business Studies*, **27**, pp. 517–551.
- Liebeskind, J. P. (1996). 'Knowledge, strategy, and the theory of the firm', *Strategic Management Journal*, **17** (Winter Special Issue), pp. 93–107.
- Lovett, M. J. and J. B. MacDonald (2005). 'How does financial performance affect marketing? Studying the marketing-finance relationship from a dynamic perspective', *Journal of the Academy of Marketing Science*, **33**, pp. 476–485.
- Maltz, E. and A. K. Kohli (1996). 'Market intelligence dissemination across functional boundaries', *Journal of Marketing Research*, **33**, pp. 47–61.
- McDonald, R. P. and H. W. Marsh (1990). 'Choosing a multivariate model: noncentrality and goodness of fit', *Psychological Bulletin*, **107**, pp. 247–255.
- McEvily, S. K., S. Das and K. McCabe (2000). 'Avoiding competence substitution through knowledge sharing', *Academy of Management Review*, **25**, pp. 294–311.
- Melin, L. (1992). 'Internationalization as a strategy process', *Strategic Management Journal*, **13** (Special Issue), pp. 99–118.
- Meyer, A. D. (1982). 'Adapting to environmental jolts', *Administrative Science Quarterly*, **27**, pp. 515–536.
- Minbaeva, D., T. Pedersen, I. Bjorkman, C. F. Fey and H. J. Park (2003). 'MNC knowledge transfer, subsidiary absorptive capacity, and HRM', *Journal of International Business Studies*, **34**, pp. 586–599.
- Möller, A. and S. Schaltegger (2005). 'The sustainability balanced scorecard as a framework for eco-efficiency analysis', *Journal of Industrial Ecology*, **9**, pp. 73–83.
- Moorman, C. (1995). 'Organizational market information processes: cultural antecedents and new product outcomes', *Journal of Marketing Research*, **32**, pp. 318–335.
- Moorman, C. and A. S. Miner (1997). 'The impact of organizational memory on new product performance and creativity', *Journal of Marketing Research*, **34**, pp. 91–106.
- Morgan, N. A., A. Kaleka and C. S. Katsikeas (2004). 'Antecedents of export venture performance: a theoretical model and empirical assessment', *Journal of Marketing*, **68**, pp. 90–108.
- Nakata, C. and K. Sivakumar (2001). 'Instituting the marketing concept in a multinational setting: the role of national culture', *Journal of the Academy of Marketing Science*, **29**, pp. 255–275.
- Narver, J. C. and S. F. Slater (1990). 'The effect of a market orientation on business profitability', *Journal of Marketing*, **54**, pp. 20–35.
- Niven, P. R. (2002). *Balanced Scorecard Step-by-Step: Maximizing Performance and Maintaining Results*. New York: Wiley.
- Olson, E. M. and S. F. Slater (2002). 'The balanced scorecard, competitive strategy, and performance', *Business Horizons*, **45**, pp. 11–16.
- Oviatt, B. M. and P. P. McDougall (1994). 'Toward a theory of international new ventures', *Journal of International Business Studies*, **25**, pp. 45–64.
- Podsakoff, P. M. and D. W. Organ (1986). 'Self-reports in organizational research: problems and prospects', *Journal of Management*, **12**, pp. 531–544.
- Robson, M. J., C. S. Katsikeas and D. C. Bello (2008). 'Drivers and performance outcomes of trust in international strategic alliances: the role of organizational complexity', *Organization Science*, **19**, pp. 647–665.

- Saka-Helmhout, A. (2007). 'Unraveling learning with multinational corporations', *British Journal of Management*, **18**, pp. 294–310.
- Sinkula, J. M. (1994). 'Market information processing and organizational learning', *Journal of Marketing*, **58**, pp. 35–45.
- Slater, S. F. and J. C. Narver (1995). 'Market orientation and the learning organization', *Journal of Marketing*, **59**, pp. 63–74.
- Spender, J. C. (1996). 'Making knowledge the basis of a dynamic theory of the firm', *Strategic Management Journal*, **17** (Winter Special Issue), pp. 45–62.
- Srivastava, R. K., T. A. Shervani and L. Fahey (1999). 'Marketing, business processes, and shareholder value: an organizationally embedded view of marketing activities and the discipline of marketing', *Journal of Marketing*, **63** (Special Issue), pp. 168–179.
- Thomas, J. B., S. M. Clark and D. A. Gioia (1993). 'Strategic sensemaking and organizational performance: linkages among scanning, interpretation, action, and outcomes', *Academy of Management Journal*, **36**, pp. 239–270.
- Thomas, J. B., D. A. Gioia and D. J. Ketchen Jr (1997). 'Strategic sensemaking: learning through scanning, interpretation, action, and performance'. In J. S. Walsh and A. S. Huff (eds), *Advances in Strategic Management*, pp. 299–329. Greenwich, CT: JAI Press.
- Thomas, J. B., S. W. Sussman and J. C. Henderson (2001). 'Understanding "strategic learning": linking organizational learning, knowledge management, and sensemaking', *Organization Science*, **12**, pp. 331–345.
- Vorhies, D. W. and N. A. Morgan (2003). 'A configuration theory assessment of marketing organization fit with business strategy and its relationship with marketing performance', *Journal of Marketing*, **67**, pp. 100–115.
- Vorhies, D. W. and N. A. Morgan (2005). 'Benchmarking marketing capabilities for sustainable competitive advantage', *Journal of Marketing*, **69**, pp. 80–94.
- Yeniurt, S. (2003). 'A literature review and integrative performance measurement framework for multinational companies', *Marketing Intelligence and Planning*, **21**, pp. 134–142.
- Yip, G. S. (2003). *Total Global Strategy II*, 2nd edn. Upper Saddle River, NJ: Prentice Hall.
- Zou, S. and S. T. Cavusgil (2002). 'The GMS: a broad conceptualization of global marketing strategy and its effect on firm performance', *Journal of Marketing*, **66**, pp. 40–57.

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